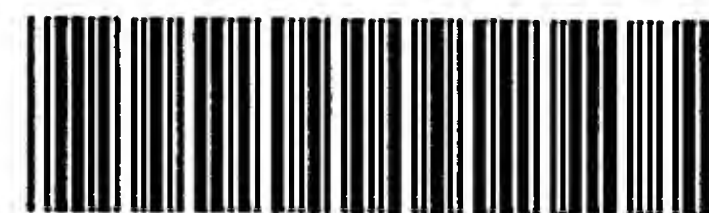


RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/582,413
Source: IFWP
Date Processed by STIC: 06/22/2006

ENTERED



IFWP

RAW SEQUENCE LISTING

DATE: 06/22/2006

PATENT APPLICATION: US/10/582,413

TIME: 12:52:10

Input Set : A:\14875-164US1.txt

Output Set: N:\CRF4\06222006\J582413.raw

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3 <110> APPLICANT: Ohtomo, Toshihiko
4       Yabuta, Naohiro
5       Tsunoda, Hiroyuki
6       Tsuchiya, Masayuki
8 <120> TITLE OF INVENTION: Methods for enhancing antibody activity
10 <130> FILE REFERENCE: 14875-164US1
C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/582,413
C--> 12 <141> CURRENT FILING DATE: 2006-06-09
12 <150> PRIOR APPLICATION NUMBER: PCT/JP2004/018493
13 <151> PRIOR FILING DATE: 2004-12-10
15 <150> PRIOR APPLICATION NUMBER: JP 2003-415760
16 <151> PRIOR FILING DATE: 2003-12-12
18 <160> NUMBER OF SEQ ID NOS: 28
20 <170> SOFTWARE: PatentIn version 3.1
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24 <212> TYPE: DNA
25 <213> ORGANISM: Macaca fascicularis
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28 <221> NAME/KEY: CDS
29 <222> LOCATION: (11)..(1918)
30 <223> OTHER INFORMATION:
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37 ctc ctg gcc cct caa aac ctg gcc caa gtc agc agc caa gat gtc tcc      97
38 Leu Leu Ala Pro Gln Asn Leu Ala Gln Val Ser Ser Gln Asp Val Ser
39   15           20           25
41 ttg ctg gcc tcg gac tca gag ccc ctg aag tgt ttc tcc cga aca ttt      145
42 Leu Leu Ala Ser Asp Ser Glu Pro Leu Lys Cys Phe Ser Arg Thr Phe
43 30           35           40           45
45 gag gac ctc act tgc ttc tgg gat gag gaa gag gca gca ccc agt ggg      193
46 Glu Asp Leu Thr Cys Phe Trp Asp Glu Glu Glu Ala Ala Pro Ser Gly
47           50           55           60
49 aca tac cag ctg ctg tat gcc tac ccg ggg gag aag ccc cgt gcc tgc      241
50 Thr Tyr Gln Leu Leu Tyr Ala Tyr Pro Gly Glu Lys Pro Arg Ala Cys
51           65           70           75
53 ccc ctg agt tct cag agc gtg ccc cgc ttt gga acc cga tac gtg tgc      289
54 Pro Leu Ser Ser Gln Ser Val Pro Arg Phe Gly Thr Arg Tyr Val Cys
55           80           85           90
57 cag ttt cca gcc cag gaa gaa gtg cgt ctc ttc tct ccg ctg cac ctc      337
58 Gln Phe Pro Ala Gln Glu Glu Val Arg Leu Phe Ser Pro Leu His Leu

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Input Set : A:\14875-164US1.txt

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61	tgg gtg aag aat gtg ttc cta aac cag act cag att cag cga gtc ctc	385		
62	Trp Val Lys Asn Val Phe Leu Asn Gln Thr Gln Ile Gln Arg Val Leu			
63	110 115 120 125			
65	ttt gtg gac agt gta ggc ctg ccg gct ccc ccc agt atc atc aag gcc	433		
66	Phe Val Asp Ser Val Gly Leu Pro Ala Pro Pro Ser Ile Ile Lys Ala			
67	130 135 140			
69	atg ggt ggg agc cag cca ggg gaa ctt cag atc agc tgg gag gcc cca	481		
70	Met Gly Gly Ser Gln Pro Gly Glu Leu Gln Ile Ser Trp Glu Ala Pro			
71	145 150 155			
73	gct cca gaa atc agt gat ttc ctg agg tac gaa ctc cgc tat ggc ccc	529		
74	Ala Pro Glu Ile Ser Asp Phe Leu Arg Tyr Glu Leu Arg Tyr Gly Pro			
75	160 165 170			
77	aaa gat ctc aag aac tcc act ggt ccc acg gtc ata cag ttg atc gcc	577		
78	Lys Asp Leu Lys Asn Ser Thr Gly Pro Thr Val Ile Gln Leu Ile Ala			
79	175 180 185			
81	aca gaa acc tgc tgc cct gct ctg cag agg cca cac tca gcc tct gct	625		
82	Thr Glu Thr Cys Cys Pro Ala Leu Gln Arg Pro His Ser Ala Ser Ala			
83	190 195 200 205			
85	ctg gac cag tct cca tgt gct cag ccc aca atg ccc tgg caa gat gga	673		
86	Leu Asp Gln Ser Pro Cys Ala Gln Pro Thr Met Pro Trp Gln Asp Gly			
87	210 215 220			
89	cca aag cag acc tcc cca act aga gaa gct tca gct ctg aca gca gtg	721		
90	Pro Lys Gln Thr Ser Pro Thr Arg Glu Ala Ser Ala Leu Thr Ala Val			
91	225 230 235			
93	ggt gga agc tgc ctc atc tca gga ctc cag cct ggc aac tcc tac tgg	769		
94	Gly Gly Ser Cys Leu Ile Ser Gly Leu Gln Pro Gly Asn Ser Tyr Trp			
95	240 245 250			
97	ctg cag ctg cgc agc gaa cct gat ggg atc tcc ctc ggt ggc tcc tgg	817		
98	Leu Gln Leu Arg Ser Glu Pro Asp Gly Ile Ser Leu Gly Gly Ser Trp			
99	255 260 265			
101	gga tcc tgg tcc ctc cct gtg act gtg gac ctg cct gga gat gca gtg	865		
102	Gly Ser Trp Ser Leu Pro Val Thr Val Asp Leu Pro Gly Asp Ala Val			
103	270 275 280 285			
105	gca att gga ctg caa tgc ttt acc ttg gac ctg aag aat gtt acc tgt	913		
106	Ala Ile Gly Leu Gln Cys Phe Thr Leu Asp Leu Lys Asn Val Thr Cys			
107	290 295 300			
109	caa tgg cag caa gag gac cat gct agt tcc caa ggt ttc ttc tac cac	961		
110	Gln Trp Gln Gln Glu Asp His Ala Ser Ser Gln Gly Phe Phe Tyr His			
111	305 310 315			
113	agc agg gca cgg tgc tgc ccc aga gac agg tac ccc atc tgg gag gac	1009		
114	Ser Arg Ala Arg Cys Cys Pro Arg Asp Arg Tyr Pro Ile Trp Glu Asp			
115	320 325 330			
117	tgt gaa gag gaa gag aaa aca aat cca gga tta cag acc cca cag ttc	1057		
118	Cys Glu Glu Glu Glu Lys Thr Asn Pro Gly Leu Gln Thr Pro Gln Phe			
119	335 340 345			
121	tct cgc tgc cac ttc aag tca cga aat gac agc gtt att cac atc ctt	1105		
122	Ser Arg Cys His Phe Lys Ser Arg Asn Asp Ser Val Ile His Ile Leu			
123	350 355 360 365			

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Input Set : A:\14875-164US1.txt

Output Set: N:\CRF4\06222006\J582413.raw

125	gtg	gag	gtg	acc	aca	gcc	ctg	ggt	gct	gtt	cac	agt	tac	ctg	ggc	tcc	1153
126	Val	Glu	Val	Thr	Thr	Ala	Leu	Gly	Ala	Val	His	Ser	Tyr	Leu	Gly	Ser	
127				370						375					380		
129	cct	ttc	tgg	atc	cac	cag	gct	gtg	cgc	ctc	ccc	acc	cca	aac	ttg	cac	1201
130	Pro	Phe	Trp	Ile	His	Gln	Ala	Val	Arg	Leu	Pro	Thr	Pro	Asn	Leu	His	
131				385					390					395			
133	tgg	agg	gag	atc	tcc	agc	ggg	cat	ctg	gaa	ttg	gag	tgg	cag	cac	cca	1249
134	Trp	Arg	Glu	Ile	Ser	Ser	Gly	His	Leu	Glu	Leu	Glu	Trp	Gln	His	Pro	
135			400					405					410				
137	tca	tcc	tgg	gca	gcc	caa	gag	acc	tgc	tat	caa	ctc	cga	tac	aca	gga	1297
138	Ser	Ser	Trp	Ala	Ala	Gln	Glu	Thr	Cys	Tyr	Gln	Leu	Arg	Tyr	Thr	Gly	
139		415					420					425					
141	gaa	ggc	cat	cag	gac	tgg	aag	gtg	ctg	gag	ccg	cct	ctc	ggg	gcc	cga	1345
142	Glu	Gly	His	Gln	Asp	Trp	Lys	Val	Leu	Glu	Pro	Pro	Leu	Gly	Ala	Arg	
143	430					435				440					445		
145	gga	ggg	acc	ctg	gag	ctg	cgc	ccg	cga	tct	cgc	tac	cgt	tta	cag	ctg	1393
146	Gly	Gly	Thr	Leu	Glu	Leu	Arg	Pro	Arg	Ser	Arg	Tyr	Arg	Leu	Gln	Leu	
147				450					455					460			
149	cgc	gcc	agg	ctc	aat	ggc	ccc	acc	tac	caa	ggt	ccc	tgg	agc	tcg	tgg	1441
150	Arg	Ala	Arg	Leu	Asn	Gly	Pro	Thr	Tyr	Gln	Gly	Pro	Trp	Ser	Ser	Trp	
151				465					470					475			
153	tcg	gac	cca	gct	agg	gtg	gag	acc	gcc	acc	gag	acc	gcc	tgg	att	tcc	1489
154	Ser	Asp	Pro	Ala	Arg	Val	Glu	Thr	Ala	Thr	Glu	Thr	Ala	Trp	Ile	Ser	
155			480					485					490				
157	ttg	gtg	acc	gct	ctg	ctg	cta	gtg	ctg	ggc	ctc	agc	gcc	gtc	ctg	ggc	1537
158	Leu	Val	Thr	Ala	Leu	Leu	Leu	Val	Leu	Gly	Leu	Ser	Ala	Val	Leu	Gly	
159		495					500					505					
161	ctg	ctg	ctg	ctg	agg	tgg	cag	ttt	cct	gca	cac	tac	agg	aga	ctg	agg	1585
162	Leu	Leu	Leu	Leu	Arg	Trp	Gln	Phe	Pro	Ala	His	Tyr	Arg	Arg	Leu	Arg	
163	510					515				520					525		
165	cat	gcc	ctg	tgg	ccc	tca	ctt	cca	gat	ctg	cac	cga	gtc	cta	ggc	cag	1633
166	His	Ala	Leu	Trp	Pro	Ser	Leu	Pro	Asp	Leu	His	Arg	Val	Leu	Gly	Gln	
167				530					535					540			
169	tac	ctt	agg	gac	act	gca	gcc	ctg	agt	ccg	ccc	aag	gcc	aca	gtc	tca	1681
170	Tyr	Leu	Arg	Asp	Thr	Ala	Ala	Leu	Ser	Pro	Pro	Lys	Ala	Thr	Val	Ser	
171				545					550					555			
173	gat	acc	tgt	gaa	gaa	gtg	gaa	ccc	agc	ctc	ctt	gaa	atc	ctc	ccc	aag	1729
174	Asp	Thr	Cys	Glu	Glu	Val	Glu	Pro	Ser	Leu	Leu	Glu	Ile	Leu	Pro	Lys	
175			560					565					570				
177	tcc	tca	gag	agg	act	cct	ttg	ccc	ctg	tgt	tcc	tcc	cag	tcc	cag	atg	1777
178	Ser	Ser	Glu	Arg	Thr	Pro	Leu	Pro	Leu	Cys	Ser	Ser	Gln	Ser	Gln	Met	
179		575					580						585				
181	gac	tac	cga	aga	ttg	cag	cct	tct	tgc	ctg	ggg	acc	atg	ccc	ctg	tct	1825
182	Asp	Tyr	Arg	Arg	Leu	Gln	Pro	Ser	Cys	Leu	Gly	Thr	Met	Pro	Leu	Ser	
183	590					595				600					605		
185	gtg	tgc	cca	ccc	atg	gct	gag	tca	ggg	tcc	tgc	tgt	acc	acc	cac	att	1873
186	Val	Cys	Pro	Pro	Met	Ala	Glu	Ser	Gly	Ser	Cys	Cys	Thr	Thr	His	Ile	
187				610					615						620		
189	gcc	aac	cat	tcc	tac	cta	cca	cta	agc	tat	tgg	cag	cag	cct	tga		1918

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/582,413

DATE: 06/22/2006

TIME: 12:52:10

Input Set : A:\14875-164US1.txt

Output Set: N:\CRF4\06222006\J582413.raw

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190 Ala Asn His Ser Tyr Leu Pro Leu Ser Tyr Trp Gln Gln Pro
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196 <211> LENGTH: 635
197 <212> TYPE: PRT
198 <213> ORGANISM: Macaca fascicularis
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204 Pro Gln Asn Leu Ala Gln Val Ser Ser Gln Asp Val Ser Leu Leu Ala
205          20                      25                      30
207 Ser Asp Ser Glu Pro Leu Lys Cys Phe Ser Arg Thr Phe Glu Asp Leu
208          35                      40                      45
210 Thr Cys Phe Trp Asp Glu Glu Glu Ala Ala Pro Ser Gly Thr Tyr Gln
211          50                      55                      60
213 Leu Leu Tyr Ala Tyr Pro Gly Glu Lys Pro Arg Ala Cys Pro Leu Ser
214 65          70                      75                      80
216 Ser Gln Ser Val Pro Arg Phe Gly Thr Arg Tyr Val Cys Gln Phe Pro
217          85                      90                      95
219 Ala Gln Glu Glu Val Arg Leu Phe Ser Pro Leu His Leu Trp Val Lys
220          100                     105                     110
222 Asn Val Phe Leu Asn Gln Thr Gln Ile Gln Arg Val Leu Phe Val Asp
223          115                     120                     125
225 Ser Val Gly Leu Pro Ala Pro Pro Ser Ile Ile Lys Ala Met Gly Gly
226          130                     135                     140
228 Ser Gln Pro Gly Glu Leu Gln Ile Ser Trp Glu Ala Pro Ala Pro Glu
229 145          150                     155                     160
231 Ile Ser Asp Phe Leu Arg Tyr Glu Leu Arg Tyr Gly Pro Lys Asp Leu
232          165                     170                     175
234 Lys Asn Ser Thr Gly Pro Thr Val Ile Gln Leu Ile Ala Thr Glu Thr
235          180                     185                     190
237 Cys Cys Pro Ala Leu Gln Arg Pro His Ser Ala Ser Ala Leu Asp Gln
238          195                     200                     205
240 Ser Pro Cys Ala Gln Pro Thr Met Pro Trp Gln Asp Gly Pro Lys Gln
241          210                     215                     220
243 Thr Ser Pro Thr Arg Glu Ala Ser Ala Leu Thr Ala Val Gly Gly Ser
244 225          230                     235                     240
246 Cys Leu Ile Ser Gly Leu Gln Pro Gly Asn Ser Tyr Trp Leu Gln Leu
247          245                     250                     255
249 Arg Ser Glu Pro Asp Gly Ile Ser Leu Gly Gly Ser Trp Gly Ser Trp
250          260                     265                     270
252 Ser Leu Pro Val Thr Val Asp Leu Pro Gly Asp Ala Val Ala Ile Gly
253          275                     280                     285
255 Leu Gln Cys Phe Thr Leu Asp Leu Lys Asn Val Thr Cys Gln Trp Gln
256          290                     295                     300
258 Gln Glu Asp His Ala Ser Ser Gln Gly Phe Phe Tyr His Ser Arg Ala
259 305          310                     315                     320
261 Arg Cys Cys Pro Arg Asp Arg Tyr Pro Ile Trp Glu Asp Cys Glu Glu

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/582,413

DATE: 06/22/2006

TIME: 12:52:10

Input Set : A:\14875-164US1.txt

Output Set: N:\CRF4\06222006\J582413.raw

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262          325          330          335
264 Glu Glu Lys Thr Asn Pro Gly Leu Gln Thr Pro Gln Phe Ser Arg Cys
265          340          345          350
267 His Phe Lys Ser Arg Asn Asp Ser Val Ile His Ile Leu Val Glu Val
268          355          360          365
270 Thr Thr Ala Leu Gly Ala Val His Ser Tyr Leu Gly Ser Pro Phe Trp
271          370          375          380
273 Ile His Gln Ala Val Arg Leu Pro Thr Pro Asn Leu His Trp Arg Glu
274 385          390          395          400
276 Ile Ser Ser Gly His Leu Glu Leu Glu Trp Gln His Pro Ser Ser Trp
277          405          410          415
279 Ala Ala Gln Glu Thr Cys Tyr Gln Leu Arg Tyr Thr Gly Glu Gly His
280          420          425          430
282 Gln Asp Trp Lys Val Leu Glu Pro Pro Leu Gly Ala Arg Gly Gly Thr
283          435          440          445
285 Leu Glu Leu Arg Pro Arg Ser Arg Tyr Arg Leu Gln Leu Arg Ala Arg
286          450          455          460
288 Leu Asn Gly Pro Thr Tyr Gln Gly Pro Trp Ser Ser Trp Ser Asp Pro
289 465          470          475          480
291 Ala Arg Val Glu Thr Ala Thr Glu Thr Ala Trp Ile Ser Leu Val Thr
292          485          490          495
294 Ala Leu Leu Leu Val Leu Gly Leu Ser Ala Val Leu Gly Leu Leu Leu
295          500          505          510
297 Leu Arg Trp Gln Phe Pro Ala His Tyr Arg Arg Leu Arg His Ala Leu
298          515          520          525
300 Trp Pro Ser Leu Pro Asp Leu His Arg Val Leu Gly Gln Tyr Leu Arg
301          530          535          540
303 Asp Thr Ala Ala Leu Ser Pro Pro Lys Ala Thr Val Ser Asp Thr Cys
304 545          550          555          560
306 Glu Glu Val Glu Pro Ser Leu Leu Glu Ile Leu Pro Lys Ser Ser Glu
307          565          570          575
309 Arg Thr Pro Leu Pro Leu Cys Ser Ser Gln Ser Gln Met Asp Tyr Arg
310          580          585          590
312 Arg Leu Gln Pro Ser Cys Leu Gly Thr Met Pro Leu Ser Val Cys Pro
313          595          600          605
315 Pro Met Ala Glu Ser Gly Ser Cys Cys Thr Thr His Ile Ala Asn His
316          610          615          620
318 Ser Tyr Leu Pro Leu Ser Tyr Trp Gln Gln Pro
319 625          630          635
321 <210> SEQ ID NO: 3
322 <211> LENGTH: 24
323 <212> TYPE: DNA
324 <213> ORGANISM: Artificial
326 <220> FEATURE:
327 <223> OTHER INFORMATION: an artificially synthesized sequence
329 <400> SEQUENCE: 3
330 caggggccag tggatagact gatg
332 <210> SEQ ID NO: 4
333 <211> LENGTH: 23

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24

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/582,413

DATE: 06/22/2006
TIME: 12:52:11

Input Set : A:\14875-164US1.txt
Output Set: N:\CRF4\06222006\J582413.raw

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:3,4,9,10,11,12,13,14,15,16,17,18

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/582,413

DATE: 06/22/2006

TIME: 12:52:11

Input Set : A:\14875-164US1.txt

Output Set: N:\CRF4\06222006\J582413.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application No

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:32 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:1,Line#:30

L:353 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:5,Line#:351

L:433 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:7,Line#:431